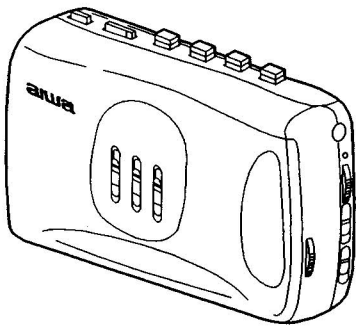
aiwa

HS-TA323
HS-TA317
HS-TA314W
HS-TA317W
HS-T28MK3

SERVICE MANUAL



STEREO RADIO
CASSETTE PLAYER

• BASIC TAPE MECHANISM : OZM – 2N

• TYPE. Y,YL,YK,YZ (323) YU (314W)
Y (317),YU (317W),Y (T28MK3)

SPECIFICATIONS

Frequency range:	FM: 87.5-108 MHz AM: 530-1705 kHz (HS-TA314W/ TA317W) 530-1605 kHz (HS-TA323/TA317/ T28MK3)
Maximum output:	20mW + 20mW (EIAJ/16Ω) 15mW + 15mW (EIAJ/32Ω)
Power source:	Battery DC 3V, R6P (LR6, SUM-3, AA) X2 Domestic AC power (using optional AC adaptor: AIWA AC-620/AC-300)
Battery life:	Using manganese batteries (R6P, SUM-3, AA) Approx. 4 hours (EIAJ, 1mW output, playback mode) Using alkaline batteries (LR6, AM-3,AA) Approx. 8 hours (EIAJ, 1mW output, playback mode)
Maximum dimensions: (W X H X D)	89.7 X 120.4 X 37.2 mm ($3^5/_8$ X $4^3/_4$ X $1^1/_2$ inches)
Weight:	Approx. 206g, 0.45 lbs (including batteries)

• Design and specifications are subject to change without notice.

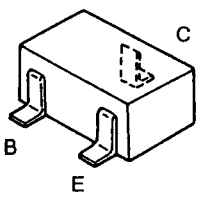
S/M Code No. 09 – 938 – 030 – 101

ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	ｶﾝﾘ NO.	DESCRIPTION
IC			
	87-001-351-089		IC, AN6612S
	87-002-677-089		IC, TA2002F
	87-001-379-089		IC, TA8122AF
TRANSISTOR			
	87-026-264-089		C-TR, RN1411
	89-112-964-089		TR, 2SA1296Y
MAIN C.B			
BPF101	87-030-312-019		FLTR, GFMB3-1-T
C1	87-010-573-089		C-CAP, S 390P-50 UJ
C2	87-010-573-089		C-CAP, S 390P-50 UJ
C3	87-010-573-089		C-CAP, S 390P-50 UJ
C4	87-010-573-089		C-CAP, S 390P-50 UJ
C5	87-010-498-049		CAP, E 10-16 GAS
C6	87-010-498-049		CAP, E 10-16 GAS
C7	87-010-180-089		C-CAP, S 1500P-50 B
C8	87-010-180-089		C-CAP, S 1500P-50 B
C9	87-010-195-089		C-CAP, S 0.068-25 F
C10	87-010-195-089		C-CAP, S 0.068-25 F
C11	87-010-196-089		C-CAP, S 0.1-25 F
C12	87-010-196-089		C-CAP, S 0.1-25 F
C13	87-010-179-089		C-CAP, S 1200P-50 B
C14	87-010-179-089		C-CAP, S 1200P-50 B
C15	87-010-499-049		CAP, E 22-6.3 GAS
C16	87-010-497-049		CAP, E 4.7-35 GAS
C17	87-010-452-089		C-CAP, 1-16 F
C18	87-010-450-089		C-CAP, 0.47-16 F
C19	87-010-422-079		CAP, TN 22-3.15 S89
C20	87-010-503-049		CAP, E 220-4 GAS
C21	87-010-452-089		C-CAP, 1-16 F
C22	87-010-450-089		C-CAP, 0.47-16 F
C23	87-010-450-089		C-CAP, 0.47-16 F
C40	87-010-495-049		CAP, E 2.2-50 GAS
C41	87-010-493-049		CAP, E 0.47-50 GAS
C101	87-010-328-089		C-CAP, S 5P-50 UJ〈YU〉
C101	87-010-330-089		C-CAP, S 7P-50 UJ〈EXCEPT YU〉
C102	87-012-150-089		C-CAP, S 20P-50 CH
C103	87-010-315-089		C-CAP, S 27P-50 CH
C104	87-010-333-089		C-CAP, S 10P-50UJ〈YU〉
C104	87-010-331-089		C-CAP, S 8P-50UJ〈YU〉
C105	87-010-197-089		C-CAP, S 0.01-25 B
C106	87-010-313-089		C-CAP, S 18P-50 CH
C107	87-010-172-089		C-CAP, S 330P-50 SL
C108	87-012-141-089		C-CAP, S 0.22-16 F
C109	87-010-196-089		C-CAP, S 0.1-25 F
C110	87-010-195-089		C-CAP, S 0.068-25 F
C111	87-010-196-089		C-CAP, S 0.1-25 F
C112	87-010-178-089		C-CAP, S 1000P-50 B
C113	87-010-500-049		CAP, E 33-4V
C114	87-010-452-089		C-CAP, 1-16 F
C116	87-010-501-048		CAP, E 47-4 GAS
C117	87-010-193-089		C-CAP, S 0.033-25 F
C118	87-010-193-089		C-CAP, S 0.033-25 F
C119	87-010-196-089		C-CAP, S 0.1-25 F
C120	87-010-196-089		C-CAP, S 0.1-25 F
C121	87-012-140-089		C-CAP, S 470P-50 CH
C130	87-010-196-089		C-CAP, S 0.1-25 F
C131	87-010-322-089		C-CAP, S 100P-50 CH
CF101	87-008-284-019		FLTR, PFB 468J
CF102	87-030-314-019		FLTR KIT 10.7M
CF103	87-030-314-019		FLTR KIT 10.7M
CF104	87-030-200-019		VIB, CER CSB 456 F16 2M
D2	87-017-026-019		LED, KLR 226 RED
J1	87-099-375-019		JACK, DC 3.8
J2	87-049-861-019		JACK, 3.5 ST 2.5MM BK

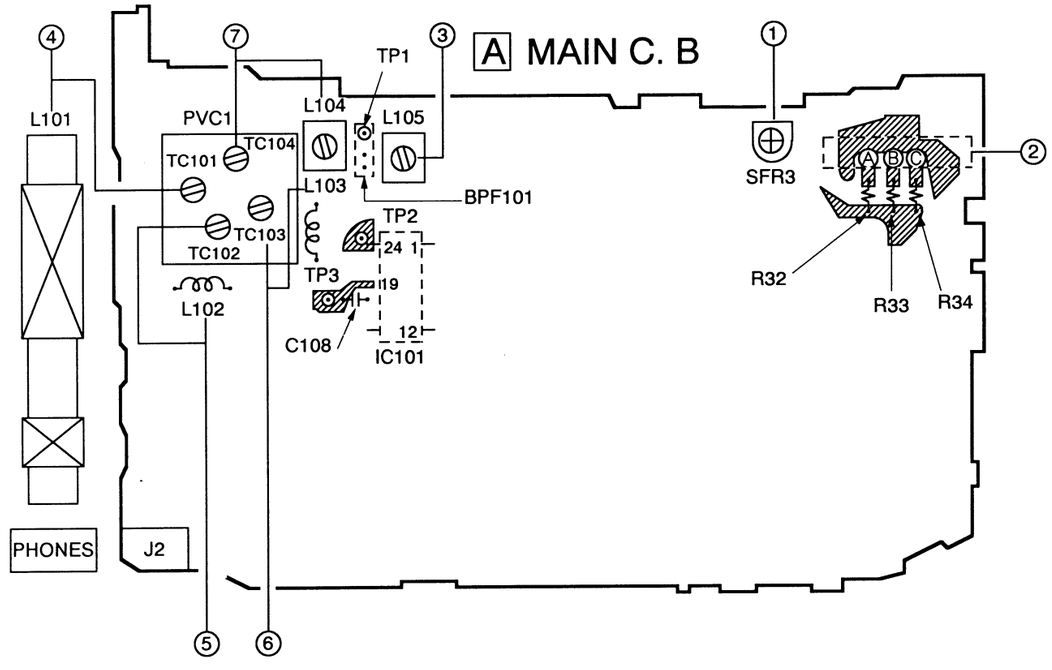
REF. NO	PART NO.	ｶﾝﾘ NO.	DESCRIPTION
L1	87-005-724-089		COIL, 3.3UH J SP02
L2	87-005-724-089		COIL, 3.3UH J SP02
L3	87-005-724-089		COIL, 3.3UH J SP02
L4	87-005-730-089		COIL, 10UH J SP02
L101	83-HRG-602-019		BAR ANT, MW
L102	83-HRJ-608-019		COIL, RF FM
L103	83-HRG-604-019		COIL, FM OSC
L104	87-007-309-019		COIL, OSC AM
L105	87-008-475-019		COIL, IFT AM
R35	87-022-042-089		C-RES, M M/F 0.51-1/8
SFR3	87-024-622-019		SFR 1K DIAG V
SW1	87-036-323-019		SW, SL 2-2-2
TC101	87-011-246-019		TUN-CAP, 7.5-20P
TC102	87-011-246-019		TUN-CAP, 7.5-20P
TC103	87-011-246-019		TUN-CAP, 7.5-20P
TC104	87-011-246-019		TUN-CAP, 7.5-20P
TH1	87-026-256-090		THERMISTER, HT-100
VC101	87-011-246-019		TUN-CAP, 7.5-20P
VC102	87-011-246-019		TUN-CAP, 7.5-20P
VC103	87-011-246-019		TUN-CAP, 7.5-20P
VC104	87-011-246-019		TUN-CAP, 7.5-20P
VR1	83-HRC-609-019		VR, 20KAX2
G-EQ C.B			
	83-HRG-605-019		G-EQ ASSY(SB)
HEAD FLEX. C.B			
	81-HK6-606-019		HEAD FLEX C.B
PH	81-HK6-604-019		HEAD PH ASSY(W/PCB-C)
MISCELLANEOUS			
M1	87-045-300-019		MOTOR(BDH3B)
SW2	87-036-110-019		SW, PUSH SPPB 62
SW3	87-036-322-019		SW, SL 2-2-3
SW5	87-036-110-019		SW, PUSH SPPB 62



RN1411

2SA1296

ADJUSTMENT



< TAPE PLAYER SECTION >

1. Tape Speed Adjustment

Settings: •Test tape: TTA-100
•Test point: PHONES JACK(J2)
•Adjustment location: SFR3

Method: Play back the test tape, adjust for 3000Hz ± 10Hz at FWD and less than 50Hz REV.

2. Motor load Adjustment

Refer to the REF No. SI-88-037-OP of service technical information.

< RADIO SECTION >

3. AM IF Adjustment

L105 ····· 468kHz

4. AM Tracking Adjustment

L101 ····· 600kHz
TC101 ····· 1400kHz

5. FM Tracking Adjustment

L102 ····· 88.0MHz
TC102 ····· 108.0MHz

6. FM Freq. Range Adjustment

L103 ····· 87.4MHz(Z only)
L103 ····· 87.0MHz(except Z)
TC103 ····· 108.3MHz(Z only)
TC103 ····· 108.5MHz(except Z)

7. AM Freq. Range Adjustment

L104 ····· 515kHz(except U)
L104 ····· 517kHz(U only)
TC104 ····· 1650kHz(except U)
TC104 ····· 1750kHz(U only)

PRACTICAL SERVICE FIGRE

< RADIO SECTION >

Sensitivity :	
(IHF, THD 3%)	FM Less than 19dB (98MHz)
(S/N 10dB)	AM Less than 54dB (1000kHz)
Intermediate frequency :	FM 10.7MHz
	AM 468kHz
FM stereo separation :	FM More than 20dB

< TAPE SECTION >

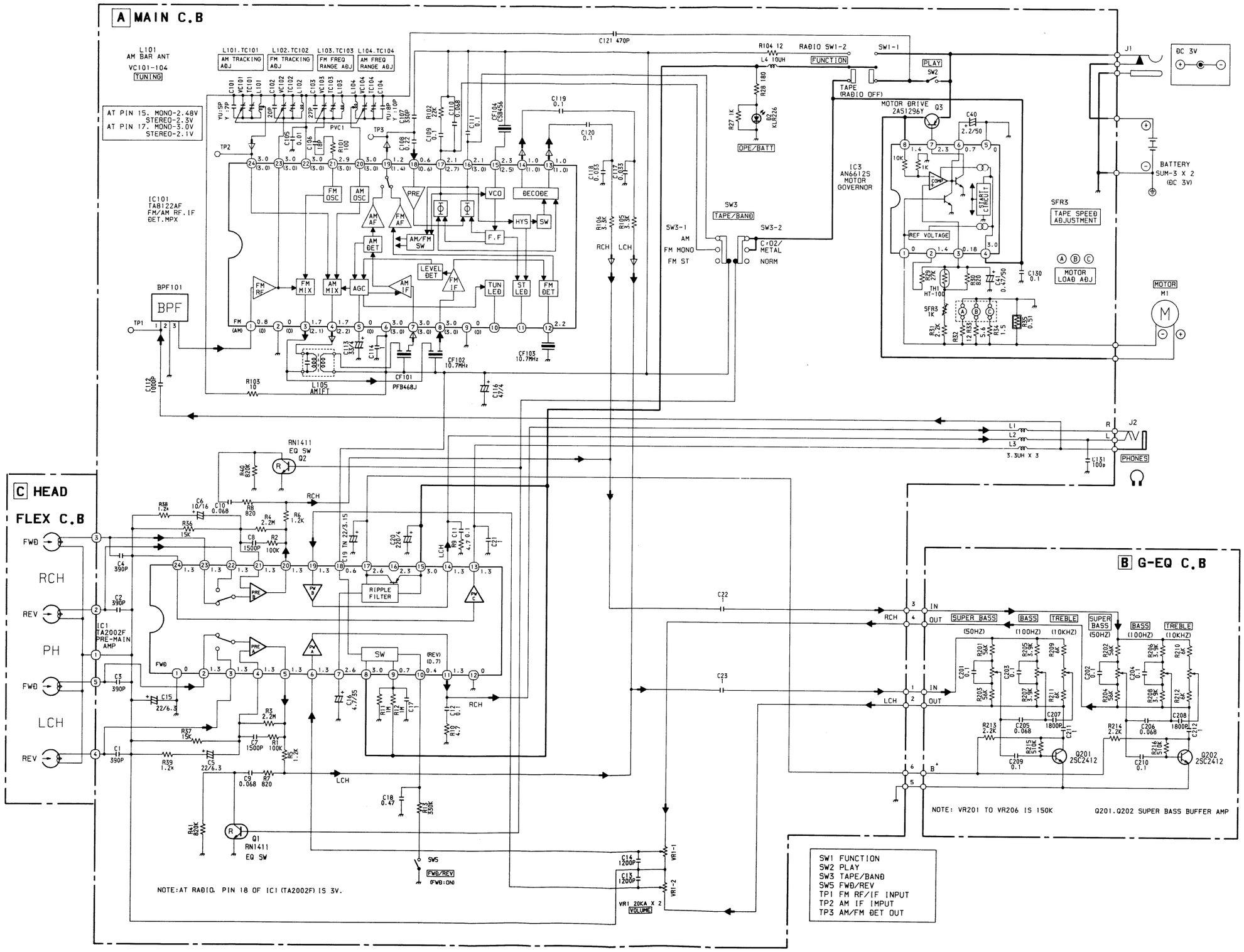
Wow & flutter :	Less than 0.5%
Pinch roller press :	125g~160g
Take-up torque :	23~45g-cm
F.F torque :	More than 90g-cm
Rew torque :	More than 90g-cm
Back tension :	3.5 ± 1.5g-cm (FWD)
	3.0 ± 1.5g-cm (REV)
S/N ratio :	More than 43dB (DC)
Distortion :	Less than 3.0% (DC)
	Less than 10.0% (REC/PB)
Noise level :	Less than 7.0mV (Vol MAX, PB)
	Less than 18.0mV (Vol MAX, REC/PB)
Frequency response :	63Hz~8kHz ± 3dB (NORMAL)
	63Hz~10kHz ± 3.0dB (CrO_2, METAL)

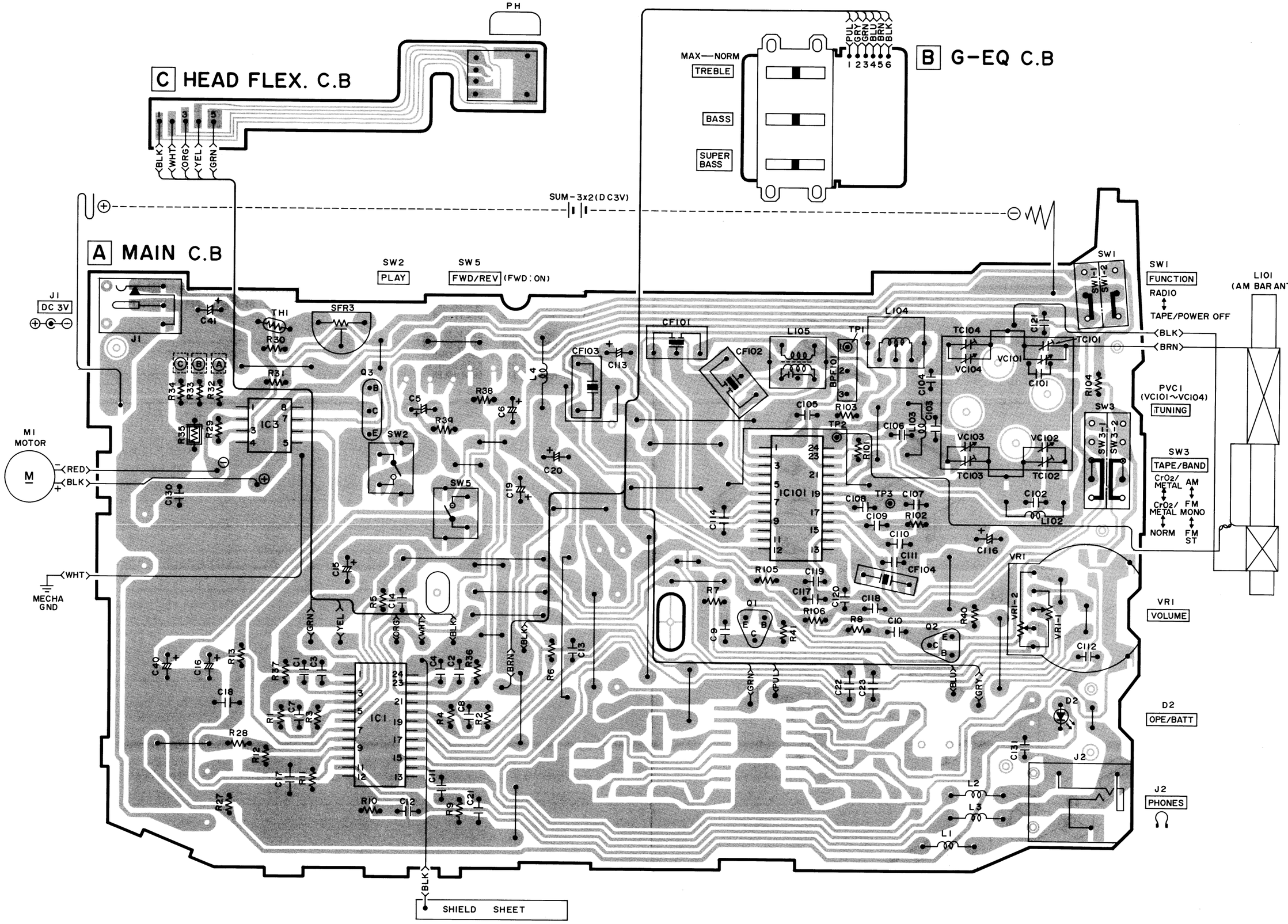
■ ACCESSORIES/PACKAGE LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

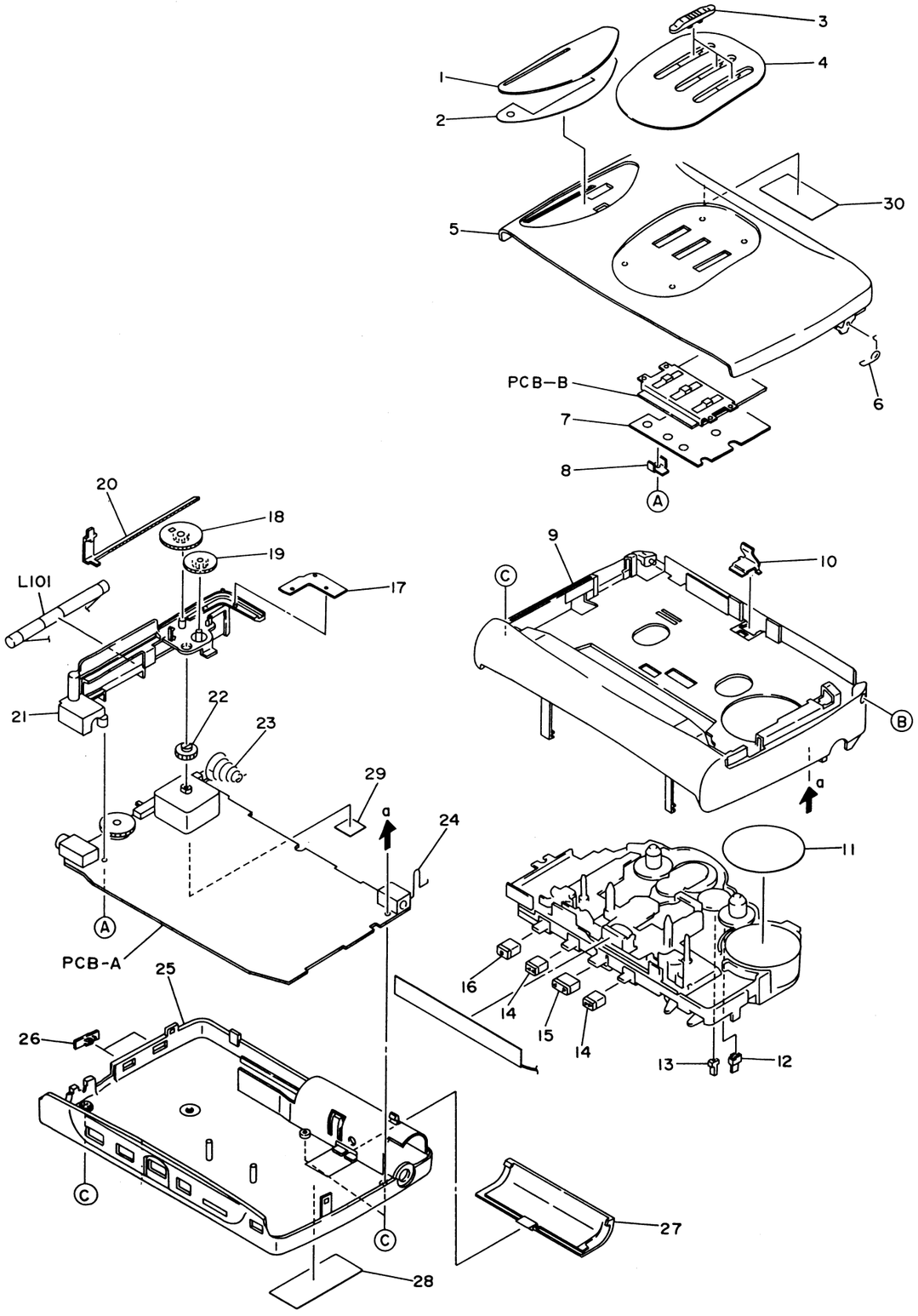
REF. NO	PART NO.	ｶﾝﾘ NO.	DESCRIPTION
1	83-HRG-901-019		IB, Y
2	87-048-226-019		HP-M16A〈YU, YK, YZ, Y〉
3	87-048-238-019		HP-23NA〈YZ1, Y1, YJ1, YLJ1〉
4	87-080-043-019		CLIP, BELT ASSY

SCHEMATIC DIAGRAM




C HEAD FLEX. C.B
PH
BLK
WHT
ORG
YEL
GRN
B G-EQ C.B
MAX—NORM
TREBLE
BASS
SUPER BASS
PUL
GRY
GRN
BLU
BRN
BLK
1 2 3 4 5 6
SUM-3x2(DC3V)
A MAIN C.B
SW2
PLAY
SW5
FWD/REV
(FWD : ON)
J1
DC 3V
M1
MOTOR
RED
BLK
WHT
MECHA GND
SHIELD SHEET
SW1
SW1
FUNCTION
RADIO
TAPE/POWER OFF
LI01
(AM BAR ANT)
PVC1
(VC101~VC104)
TUNING
SW3
TAPE/BAND
CrO2/METAL
AM
FM MONO
NORM
FM ST
VR1
VOLUME
D2
OPE/BATT
J2
PHONES
IC1
IC101
IC3
L101
L102
L104
L105
CF101
CF102
CF103
CF104
BPF101
TC101
TC102
TC103
TC104
VC101
VC102
VC103
VC104
TP1
TP2
TP3
Q1
Q2
Q3

MECHANICAL EXPLODED VIEW 1／1



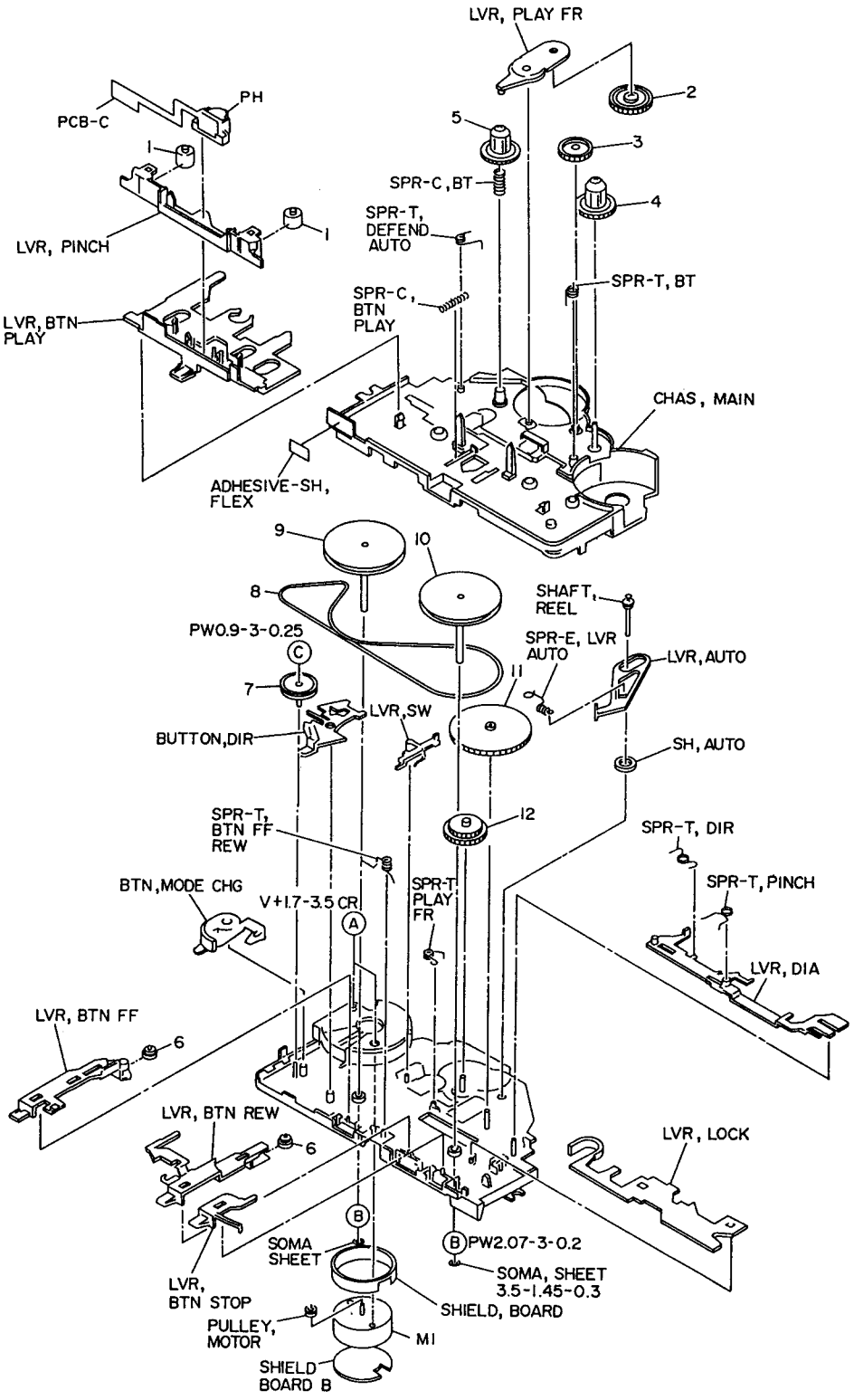
MECHANICAL PARTS LIST 1／1

DESCRIPTIONで判断できない物は “REFERENCE NAME LIST” を参照してください。
If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	83-HRG-005-019		WINDOW, TUN〈EXCEPT TA314W, TA317W〉
1	83-HRG-006-019		WINDOW, TUN YU〈TA314W, TA317W〉
2	83-HRG-208-019		ADHESIVE, TUN
3	83-HRG-008-019		KNOB SL GE
4	83-HRG-007-019		PANEL, GE〈TA323, TA314W〉〉
4	83-HRG-020-019		PANEL, GE〈TA317W, TA317〉
4	83-HRG-026-019		PANEL, GE〈T28MK3〉
5	83-HRG-001-019		LID, CASS〈TA323〉
5	83-HRG-021-019		LID, CASS〈TA314W〉
5	83-HRG-022-019		LID, CASS〈TA317W, TA317〉
5	83-HRG-023-019		LID, CASS〈T28MK3〉
6	82-HR9-202-019		T-SP, CLICK
7	81-HRE-201-019		COVER, GE
8	80-HRG-203-019		HLDR, GE
9	83-HRG-002-019		FRAME, CENTER
10	81-HRK-202-019		P-SP, CASS
11	84-530-023-019		LABEL, MOTOR (BLK)
12	81-HRE-208-019		SPACER, SW A
13	81-HRE-209-119		SPACER, SW B
14	81-HRE-019-019		BTN, FF RAW
15	81-HRE-018-019		BTN, PLAY RAW
16	81-HRE-020-019		BTN, STOP RAW
17	83-HRG-210-019		COVER, CHAS
18	83-HRG-009-019		KNOB, RTRY TUN
19	81-HRE-203-119		GEAR, IDLER

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
20	83-HRG-012-019		POINTER, TUN
21	83-HRG-201-019		CHAS, TUN
22	81-HRE-204-119		GEAR, TUN-CAP
23	83-HRG-206-019		BAT-CONTACT (-)
24	83-HRG-205-019		BAT-CONTACT (+)
25	83-HRG-003-019		CAB, REAR
26	83-HRG-010-019		KNOB, SL CONT
27	83-HRG-004-019		LID, BAT
28	83-HRG-013-019		LBL, SPEC Y〈TA323YK, YZ1, Y1, YZ, Y〉
28	83-HRG-014-019		LBL, SPEC YJ〈TA323YJ1, YLJ1〉
28	83-HRG-015-019		LBL, SPEC YU〈314W〉
28	83-HRG-018-019		LBL, SPEC YU〈317W〉
28	83-HRG-030-019		LBL, SPEC YJ〈TA317〉
28	83-HRG-031-019		LBL, SPEC YJ〈T28MK3〉
29	83-HRG-213-019		SH 8-8-0.05
30	83-HRG-212-019		CLOTH 25-13-0.35
A	87-067-384-019		VT+1.4-3.5(HL)
B	87-067-756-019		SCREW HINGE 1.4-4HL
C	87-067-768-019		VT2+1.7-7(3)BLK

TAPE MECHANISM EXPLODED VIEW 1/1



TAPE MECHANISM PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	80-ZM2-228-010		PINCH ROLLER ASSY
2	80-ZM2-224-010		GEAR, PLAY FR
3	80-ZM2-225-010		GEAR, MIRROR
4	80-ZM2-222-010		REEL TABLE, F
5	80-ZM2-223-010		REEL TABLE, R
6	80-ZM2-256-110		GEAR, FF REW
7	80-ZM2-231-010		PULLEY, BELT
8	80-ZM2-240-010		BELT, SQ 0.75-244
9	80-ZM2-262-010		FLY-WHL ASSY, FW
10	80-ZM2-216-010		FLY-WHL ASSY, R
11	80-ZM2-227-110		GEAR, AUTO
12	80-ZM2-218-010		GEAR ASSY, SLIP

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER
ｻｰｼﾞｻﾌﾟﾚｯｻ	SERGESUPPRESSOR
ｾﾗｺﾝ	CAP, CERA

サービス技術ニュース	
番号	連絡内容
G－　－	
G－　－	
G－　－	

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTORL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOADING MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL
ｼｸｱｰﾑ	ARM, SHAFT
ｼｸｶﾞｲﾄﾞ	GUIDE, SHAFT
ｽﾄﾗｯﾌﾟ	STRAP
ﾄｸﾅﾍﾞ	S-SCRW
ﾋﾝｼﾞ	HINGE
ﾋﾝｼﾞﾋﾞｽ	S-SCRW
ﾋﾞｽｾﾚｰﾄ	SCRW, SERRART

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